

Table 27.1
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Both Sexes by Race/Ethnicity

	Joinpoint Trend 1		Joinpoint Trend 2		Joinpoint Trend 3		Joinpoint Trend 4		Joinpoint Trend 5		AAPC ^d	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-1987	0.8*	1987-1996	-0.2	1996-1999	1.6	1999-2006	-0.4			0.1	-0.4
White	1975-1987	1.0*	1987-1996	0.0	1996-1999	1.9	1999-2006	-0.2			0.3	-0.2
Black	1975-2006	0.2									0.2	0.2
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-1994	-1.4	1994-2004	0.3	2004-2006	-2.0					-0.2	-0.9
White	1992-2004	0.4*	2004-2006	-2.0							-0.2	-0.8
Black	1992-2006	0.6									0.6	0.6
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-1987	0.8*	1987-1996	-0.2	1996-1999	1.7	1999-2006	-0.7*			-0.2	-0.7*
White	1975-1987	1.0*	1987-1996	-0.1	1996-2000	1.4	2000-2006	-0.8*			-0.1	-0.8*
Black	1975-2006	0.2									0.2	0.2
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2004	0.1	2004-2006	-2.5							-0.5	-1.2
White	1992-2004	0.2	2004-2006	-3.1							-0.5	-1.5
White NH ^{ef}	1992-2004	0.4*	2004-2006	-3.1							-0.4	-1.4
Black	1992-2006	0.3									0.3	0.3
Black NH ^{ef}	1992-2006	0.3									0.3	0.3
API ^e	1992-2006	0.2									0.2	0.2
AI/AN ^{eg}	1992-2006	2.1									2.1	2.1
Hispanic ^e	1992-2006	-0.3									-0.3	-0.3
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

* The APC/AAPC is significantly different from zero ($p < .05$).

- Joinpoint regression line analysis could not be performed on data series.

Table 27.2
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Males by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-1987	0.9*	1987-2006	0.0							0.0	0.0
White	1975-1987	1.0*	1987-2006	0.1							0.1	0.1
Black	1975-2006	0.2									0.2	0.2
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	-0.1									-0.1	-0.1
White	1992-2006	0.1									0.1	0.1
Black	1992-2006	0.3									0.3	0.3
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-1987	1.0*	1987-1996	-0.5	1996-1999	1.8	1999-2006	-0.8*			-0.2	-0.8*
White	1975-1987	1.2*	1987-1995	-0.6	1995-2000	1.1	2000-2006	-0.9*			-0.2	-0.9*
Black	1975-2006	0.1									0.1	0.1
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	-0.2									-0.2	-0.2
White	1992-2006	-0.1									-0.1	-0.1
White NH ^{ef}	1992-2006	0.1									0.1	0.1
Black	1992-2006	0.1									0.1	0.1
Black NH ^{ef}	1992-2006	0.0									0.0	0.0
API ^e	1992-2006	0.7*									0.7*	0.7*
AI/AN ^{eg}	1992-2006	2.3									2.3	2.3
Hispanic ^e	1992-2006	-0.4									-0.4	-0.4
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

* The APC/AAPC is significantly different from zero ($p < .05$).

- Joinpoint regression line analysis could not be performed on data series.

Table 27.3
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Trends in SEER Incidence^{ab} and U.S. Mortality^c Using the Joinpoint Regression Program,
1975-2006 With up to Four Joinpoints, 1992-2006 With up to Two Joinpoints,
Females by Race/Ethnicity

	<u>Joinpoint Trend 1</u>		<u>Joinpoint Trend 2</u>		<u>Joinpoint Trend 3</u>		<u>Joinpoint Trend 4</u>		<u>Joinpoint Trend 5</u>		<u>AAPC^d</u>	
	Years	APC	Years	APC	Years	APC	Years	APC	Years	APC	1997-2006	2002-2006
<u>SEER 9 Delay-Adjusted Incidence^a, 1975-2006</u>												
All Races	1975-2006	0.2*									0.2*	0.2*
White	1975-2006	0.4*									0.4*	0.4*
Black	1975-2006	0.5									0.5	0.5
<u>SEER 13 Delay-Adjusted Incidence^b, 1992-2006</u>												
All Races	1992-2006	-0.3*									-0.3*	-0.3*
White	1992-2004	0.0	2004-2006	-2.4							-0.5	-1.2
Black	1992-2006	1.0									1.0*	1.0*
<u>SEER 9 Observed Incidence^a, 1975-2006</u>												
All Races	1975-2003	0.2*	2003-2006	-2.3							-0.6	-1.7
White	1975-2003	0.4*	2003-2006	-3.0							-0.7	-2.1
Black	1975-2006	0.4									0.4	0.4
<u>SEER 13 Observed Incidence^b, 1992-2006</u>												
All Races	1992-2006	-0.4*									-0.4*	-0.4*
White	1992-2004	-0.1	2004-2006	-3.6							-0.9*	-1.9*
White NH ^{ef}	1992-2004	0.1	2004-2006	-3.8							-0.8	-1.8*
Black	1992-2006	0.7									0.7	0.7
Black NH ^{ef}	1992-2006	0.8									0.8	0.8
API ^e	1992-2006	-0.3									-0.3	-0.3
AI/AN ^{eg}	1992-2006	2.9									2.9	2.9
Hispanic ^e	1992-2006	-0.4									-0.4	-0.4
<u>U.S. Cancer Mortality^c, 1975-2006</u>												
All Races												
White												
Black												
<u>U.S. Cancer Mortality^c, 1992-2006</u>												
All Races												
White												
White NH ^{ef}												
Black												
Black NH ^{ef}												
API ^e												
AI/AN ^{eg}												
Hispanic ^e												

Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. (<http://srab.cancer.gov/joinpoint/>).

The APC is the Annual Percent Change based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^a Trends are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

^b Trends are from the SEER 13 areas (SEER 9 Areas, Los Angeles, San Jose-Monterey, Rural Georgia, and the Alaska Native Registry).

^c Trends are from US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^d The AAPC is the Average Annual Percent Change and is based on the APCs calculated by Joinpoint.

^e API - Asian/Pacific Islander, AI/AN - American Indian/Alaska Native, NH - Non-Hispanic

^f Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska

Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry.

The Hispanic and Non-Hispanic mortality trends exclude deaths from CT, ME, MD, MN, NH, NY, ND, OK and VT.

^g Data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

* The APC/AAPC is significantly different from zero ($p < .05$).

- Joinpoint regression line analysis could not be performed on data series.

Table 27.4
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Age-adjusted SEER Incidence^a Rates by Year, Race and Sex

Year of Diagnosis:	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
1975	19.31	34.35	8.88	20.21	36.37	9.16	10.56	16.34	6.26
1976	19.70	34.39	9.44	20.73	36.71	9.73	12.48	18.16	8.59
1977	18.99	33.39	8.88	20.00	35.58	9.18	13.45	22.67	7.06
1978	19.99	35.37	9.44	21.08	37.86	9.73	11.73	19.36	6.39
1979	19.98	35.35	9.38	21.30	38.18	9.84	10.35	15.61	6.54
1980	20.42	37.14	8.91	21.54	39.85	9.06	13.33	18.23	9.98
1981	20.69	36.34	9.75	21.95	38.76	10.31	11.60	20.72	5.48
1982	20.08	35.81	9.52	21.38	38.32	10.15	12.19	21.77	5.60
1983	20.05	36.02	9.01	21.33	38.70	9.43	12.17	18.70	7.57
1984	20.85	37.71	9.17	22.35	40.89	9.63	11.42	18.77	6.24
1985	20.68	36.38	9.87	22.09	39.29	10.34	12.99	20.33	8.02
1986	21.04	37.94	9.43	22.44	40.82	9.95	12.94	22.17	6.63
1987	21.66	39.52	9.24	23.18	42.83	9.58	13.28	21.78	7.50
1988	20.85	38.08	8.99	22.72	41.85	9.68	11.29	17.99	6.45
1989	21.03	37.42	9.64	22.74	40.94	10.20	11.32	17.49	7.16
1990	21.07	37.48	9.63	22.60	40.75	10.01	12.69	18.59	8.75
1991	20.91	37.62	9.32	22.69	41.25	9.88	12.92	19.69	8.50
1992	21.25	37.50	9.82	22.95	40.72	10.51	12.48	20.82	6.89
1993	21.23	37.63	9.70	22.85	40.57	10.38	14.11	24.40	7.76
1994	20.79	36.85	9.45	22.60	40.23	10.18	12.28	20.01	6.91
1995	20.64	36.24	9.55	22.44	39.50	10.28	11.87	18.30	7.39
1996	20.77	36.58	9.55	22.62	39.96	10.28	12.21	19.78	7.28
1997	21.03	37.06	9.55	22.91	40.59	10.19	12.54	19.97	7.98
1998	21.56	38.44	9.45	23.58	42.11	10.18	11.80	20.18	6.38
1999	21.73	38.15	9.97	23.60	41.55	10.60	14.58	22.63	9.44
2000	21.76	38.66	9.49	23.80	42.28	10.25	13.08	20.13	8.53
2001	21.58	38.13	9.61	23.85	42.03	10.58	11.50	18.44	7.01
2002	21.11	36.76	9.68	23.18	40.28	10.54	12.42	17.74	8.76
2003	21.30	37.19	9.65	23.49	40.93	10.53	12.52	20.51	7.17
2004	21.15	37.22	9.40	23.30	40.94	10.22	13.01	21.16	7.95
2005	21.38	37.57	9.47	23.39	41.29	10.06	13.13	21.02	7.80
2006	20.46	36.05	8.94	22.38	39.45	9.61	11.14	16.85	7.29
1975-2006	20.85	37.03	9.42	22.50	40.25	10.00	12.43	19.78	7.51

^a SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta). Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).
- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 27.6
Cancer of the Urinary Bladder(Invasive and *In Situ*)

SEER Incidence^a and U.S. Death^b Rates, Age-Adjusted and Age-Specific Rates, by Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence</u>									
<u>Age at Diagnosis</u>									
Age-Adjusted Rates, 2002-2006									
All ages	21.0	37.1	9.3	22.8	40.3	9.9	12.8	20.0	7.9
Under 65	6.0	9.4	2.8	6.6	10.2	3.1	3.8	5.8	2.1
65 and over	124.9	228.9	53.9	134.9	248.1	56.9	74.9	118.4	48.2
All ages (IARC world std) ^c	12.4	21.1	5.5	13.5	23.0	5.9	7.6	11.8	4.5
Age-Specific Rates, 2002-2006									
<1	-	-	-	-	-	-	-	-	-
1-4	-	-	-	-	-	-	-	-	-
5-9	-	-	-	-	-	-	-	-	-
10-14	-	-	-	-	-	-	-	-	-
15-19	0.1	0.1	-	0.1	-	-	-	-	-
20-24	0.2	0.3	0.2	0.3	0.3	0.2	-	-	-
25-29	0.4	0.5	0.3	0.4	0.5	0.4	-	-	-
30-34	0.8	1.1	0.4	0.8	1.2	0.4	-	-	-
35-39	1.5	2.2	0.9	1.7	2.4	1.0	1.0	1.6	-
40-44	3.4	5.0	1.9	3.8	5.4	2.1	2.3	3.5	1.2
45-49	7.2	11.0	3.5	7.9	12.0	3.9	4.7	6.8	2.9
50-54	14.6	22.5	6.9	15.8	24.2	7.6	10.0	15.7	5.2
55-59	28.7	45.2	13.1	31.3	49.0	14.3	19.6	30.7	10.3
60-64	49.0	78.9	21.7	54.2	86.9	23.8	26.8	41.1	15.5
65-69	78.6	129.7	34.2	86.2	141.8	37.1	50.9	79.7	29.0
70-74	112.5	194.7	46.4	123.1	212.7	49.6	65.4	101.6	40.0
75-79	147.3	268.2	60.8	158.9	289.7	64.1	86.5	137.2	55.1
80-84	169.6	323.3	73.2	181.5	349.5	76.1	101.6	161.8	68.4
85+	162.1	340.8	78.5	171.0	366.3	80.8	96.4	155.2	72.2
<u>U.S. Mortality</u>									
<u>Age at Death</u>									
Age-Adjusted Rates, 2002-2006									
All ages									
Under 65									
65 and over									
All ages (IARC world std) ^c									
Age-Specific Rates, 2002-2006									
<1									
1-4									
5-9									
10-14									
15-19									
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59									
60-64									
65-69									
70-74									
75-79									
80-84									
85+									

^a SEER 17 areas. Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

^b US Mortality Files, National Center for Health Statistics, Centers for Disease Control and Prevention.

^c Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130), unless noted.

^c Rates are per 100,000 and are age-adjusted to the IARC world standard population.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 27.7
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Survival Rates, by Race, Sex, Diagnosis Year, Stage and Age

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
5-Year Relative Survival Rates									
Year of Diagnosis:									
1960-1963 ^a	-	-	-	53	53	53	24	24	24
1970-1973 ^a	-	-	-	61	61	60	36	38	27
1975-1977 ^b	73.5	74.9	69.7	74.5	75.5	71.5	50.6	56.8	38.8 ^f
1978-1980 ^b	76.0	77.2	72.7	76.9	77.6	74.8	55.6	64.3	40.8 ^f
1981-1983 ^b	78.5	79.9	74.9	79.3	80.4	76.3	60.1	65.4	48.4 ^f
1984-1986 ^b	78.2	79.5	74.6	78.7	79.9	75.5	61.0	64.0	54.2 ^f
1987-1989 ^b	80.6	82.8	74.1	81.5	83.5	75.4	63.3	68.1	54.0 ^f
1990-1992 ^b	80.9	83.3	74.0	81.9	84.2	75.2	64.8	67.6	60.2
1993-1995 ^b	81.5	83.1	76.9	82.2	83.4	78.8	61.9	69.1	46.8
1996-1998 ^b	80.1	81.1	77.2	80.7	81.7	77.8	62.3	65.1	55.3
1999-2005 ^b	81.7 ^e	83.0 ^e	78.2 ^e	82.6 ^e	83.5 ^e	80.0 ^e	67.8 ^e	71.5 ^e	61.0 ^e
5-Year Period Survival Rates^{cd}									
Year of Diagnosis:									
1999-2005	80.3	81.8	75.8	80.6	81.9	76.7	68.4	71.8	61.8
Stage Distribution (%) 1999-2005^c									
All Stages									
Number of cases	72,583	54,093	18,490	65,545	49,207	16,338	3,454	2,184	1,270
Percent	100%	100%	100%	100%	100%	100%	100%	100%	100%
In Situ	50	51	48	51	51	49	36	39	30
Localized	36	36	35	35	36	35	40	39	41
Regional	8	7	8	7	7	8	12	11	14
Distant	4	3	5	4	3	5	7	5	10
Unstaged	3	3	3	3	3	3	5	5	5
5-Year Relative Survival Rates, 1999-2005^c									
Age at Diagnosis:									
Ages <45	90.4	91.3	88.2	91.4	92.0	89.8	78.2	79.1	74.8 ^f
Ages 45-54	85.3	85.4	84.9	85.9	85.8	86.3	73.0	77.4	60.5 ^f
Ages 55-64	84.7	84.8	84.3	85.1	85.0	85.5	73.0	75.4	67.3
Ages 65-74	80.1	81.1	76.8	80.6	81.3	78.5	65.3	71.3	54.5
Ages 75+	72.7	75.9	65.3	73.4	76.4	66.5	52.0	53.8	48.2
Ages <65	85.6	85.7	85.1	86.0	86.0	86.3	74.1	76.9	67.3
Ages 65+	76.5	78.7	70.6	77.2	79.0	72.0	58.9	63.8	51.5
Stage:									
All Stages	80.0	81.5	75.7	80.5	81.7	77.0	66.5	71.5	57.3
In Situ	97.2	97.3	97.0	97.3	97.2	97.4	96.5	98.1	91.6
Localized	74.3	76.3	68.3	74.7	76.6	68.9	63.1	65.8	58.0
Regional	36.2	37.1	33.9	36.7	37.1	35.4	30.0	36.1	21.8
Distant	5.8	5.9	5.5	5.7	6.3	4.4	7.8	0.0	11.4
Unstaged	56.0	60.6	44.4	55.1	59.1	44.7	44.1 ^f	49.2 ^f	33.7 ^f

^a Rates are based on End Results data from a series of hospital registries and one population-based registry.

^b Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Rates are based on follow-up of patients into 2006.

^c Rates are from the SEER 17 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta, San Jose-Monterey, Los Angeles, Alaska Native Registry, Rural Georgia, California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey). California excluding SF/SJM/LA, Kentucky, Louisiana, and New Jersey contribute cases for diagnosis years 2000-2005.

The remaining 13 SEER Areas contribute cases for the entire period 1999-2005. Rates are based on follow-up of patients into 2006.

^d Period survival provides a more up-to-date estimate of survival by piecing together the most recent conditional survival estimates from several cohorts. It is computed here using three year calendar blocks (2003-2005: 0-1 year survival),

(2002-2004: 1-2 year survival), (2001-2003: 2-3 year survival), (2000-2002: 3-4 year survival), (1999-2001: 4-5 years survival).

The difference in rates between 1975-1977 and 1999-2005 is statistically significant ($p < .05$).

^e The standard error of the survival rate is between 5 and 10 percentage points.

^f The standard error of the survival rate is greater than 10 percentage points.

^g - Statistic could not be calculated due to fewer than 25 cases during the time period.

Table 27.8
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Survival Rates^a
By Year of Diagnosis

All Races, Males and Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	87.5	89.4	90.5	90.1	90.3	90.5	91.0	91.3	91.1	90.1	91.6	91.3	90.6	91.5	91.5	90.5	91.0	91.3	91.2
2-year	81.3	84.5	85.8	86.2	85.7	85.6	86.5	86.7	87.1	86.0	86.6	86.7	85.6	87.0	87.0	86.6	86.4	86.8	
3-year	78.4	81.7	83.1	83.4	83.6	83.1	84.1	84.8	84.6	83.9	83.5	83.8	83.0	84.3	85.3	84.8	84.5		
4-year	76.0	79.6	81.1	82.1	82.4	82.4	82.5	82.6	82.5	81.9	81.4	82.1	81.2	82.6	83.7	82.7			
5-year	74.5	78.1	79.7	81.3	80.9	80.4	81.1	81.3	82.0	80.6	79.5	80.1	79.5	81.6	83.2				
6-year	73.1	76.6	78.5	80.1	79.7	79.1	79.6	79.8	80.2	79.6	78.0	78.7	78.5	80.9					
7-year	71.6	75.5	77.4	79.0	77.4	77.3	78.2	78.2	78.5	79.1	77.2	78.0	77.7						
8-year	70.5	74.6	76.2	77.2	75.9	76.1	77.6	77.8	77.6	78.0	76.7	76.7							
9-year	69.4	73.3	75.4	75.3	75.0	75.5	76.5	77.0	76.3	77.2	75.9								
10-year	67.9	72.5	74.4	73.4	73.9	74.5	75.9	76.8	75.8	76.4									
11-year	66.6	71.7	73.6	72.2	73.3	73.8	75.4	76.0	75.3										
12-year	65.8	70.9	72.3	71.0	72.9	73.7	75.1	75.3											
13-year	65.3	70.4	71.3	70.8	72.0	73.4	74.6												
14-year	64.5	69.4	70.1	70.2	72.0	72.8													
15-year	64.0	68.4	69.2	70.1	70.3														
16-year	63.5	67.2	68.3	68.6															
17-year	63.2	66.6	68.0																
18-year	63.0	66.0																	
19-year	63.0	65.7																	
20-year	62.8	65.5																	

^a
^b

Survival rates are relative rates expressed as percents.

Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 27.9
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Survival Rates^a
By Year of Diagnosis

All Races, Males

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	89.5	90.7	92.1	92.1	91.7	92.1	92.7	93.1	92.6	91.5	93.2	92.9	92.2	92.7	92.1	92.5	92.7	92.5	92.8
2-year	83.3	86.0	87.5	88.4	87.8	87.8	88.8	88.4	88.6	87.4	88.4	88.4	87.2	88.3	87.5	89.2	88.0	88.4	
3-year	80.2	83.3	84.9	85.8	86.0	85.9	86.5	86.5	86.1	85.2	85.4	85.1	84.6	85.2	86.1	87.3	86.0		
4-year	77.7	81.1	82.9	84.4	84.9	85.2	84.5	84.0	83.7	82.9	83.0	83.2	82.6	83.3	84.4	84.7			
5-year	75.8	79.4	81.5	83.7	82.9	83.1	82.8	82.7	83.4	81.5	80.8	81.0	80.6	82.2	83.9				
6-year	74.3	78.0	80.3	82.3	81.4	81.9	81.8	80.9	81.6	80.6	79.0	79.8	79.3	81.7					
7-year	72.6	76.9	79.0	80.8	78.5	79.8	80.1	79.2	80.0	79.8	78.1	79.2	78.5						
8-year	71.4	76.0	77.7	78.9	76.8	78.2	79.8	78.7	79.0	78.6	77.8	77.6							
9-year	70.0	74.7	76.8	76.5	75.7	77.1	79.2	78.1	77.1	78.0	76.9								
10-year	68.4	73.9	75.7	75.2	74.3	76.1	78.6	78.0	76.8	76.9									
11-year	66.8	73.2	74.9	73.7	73.8	75.3	78.4	77.0	76.4										
12-year	66.0	72.3	73.4	72.5	73.6	74.8	78.1	76.1											
13-year	65.3	71.8	72.4	72.5	72.9	74.4	77.2												
14-year	64.6	70.5	71.2	71.9	72.9	74.4													
15-year	64.3	69.5	70.3	71.2	71.7														
16-year	63.4	67.9	69.2	69.7															
17-year	63.1	67.3	69.0																
18-year	62.8	66.7																	
19-year	62.8	66.7																	
20-year	62.4	66.6																	

^a
^b

Survival rates are relative rates expressed as percents.
Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 27.10
Cancer of the Urinary Bladder (Invasive and *In Situ*)

Survival Rates^a
By Year of Diagnosis

All Races, Females

Year of Diagnosis

	1975- 1979	1980- 1984	1985- 1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Relative Survival Rates (SEER ^b)																			
1-year	81.9	85.8	85.6	84.3	85.9	85.8	86.4	86.2	87.1	86.0	87.0	86.4	86.1	87.7	89.7	84.7	86.2	87.7	86.6
2-year	75.9	80.0	80.5	79.8	79.6	79.2	79.8	81.9	83.1	81.9	81.2	81.8	81.0	82.8	85.5	79.1	81.9	82.2	
3-year	73.5	77.2	77.8	76.4	76.6	75.5	77.4	80.2	80.4	80.2	78.0	80.1	78.2	81.4	83.2	77.7	80.4		
4-year	71.5	75.3	76.1	75.2	75.1	74.6	77.0	78.3	79.0	78.9	76.7	78.8	77.1	80.3	81.6	76.7			
5-year	71.0	74.2	74.4	74.2	74.9	72.9	75.8	77.2	77.6	77.9	75.8	77.6	76.7	79.7	80.7				
6-year	69.9	72.8	73.5	73.6	74.8	71.1	73.4	76.5	76.2	76.8	75.2	75.5	76.1	78.2					
7-year	68.7	71.4	73.0	73.6	73.8	70.1	72.7	75.5	74.4	76.8	74.6	74.6	75.4						
8-year	68.4	70.7	72.2	72.4	73.1	70.1	71.2	75.1	73.9	76.2	73.7	74.0							
9-year	67.8	69.4	71.7	71.6	73.0	70.1	69.1	73.5	73.6	74.6	73.2								
10-year	66.6	68.4	70.8	68.4	72.9	70.1	68.4	73.0	72.8	74.5									
11-year	65.9	67.6	69.9	67.4	71.9	69.3	67.1	73.0	72.0										
12-year	65.3	67.3	69.1	65.5	70.9	69.3	66.8	72.4											
13-year	65.3	66.6	68.4	65.2	69.8	69.3	66.8												
14-year	64.1	66.3	67.2	65.2	69.8	65.8													
15-year	63.3	65.7	66.2	65.2	66.0														
16-year	63.3	65.3	65.6	65.2															
17-year	63.2	64.6	64.7																
18-year	63.2	63.9																	
19-year	63.2	62.9																	
20-year	63.2	62.7																	

^a

^b

Survival rates are relative rates expressed as percents.

Rates are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, and Atlanta).

Table 27.12
Cancer of the Urinary Bladder

SEER Incidence (Invasive and *In Situ*) and U.S. Mortality
Age-Adjusted Rates and Trends^a
By Race/Ethnicity and Sex

SEER Incidence	SEER 17 Areas ^b			SEER 13 Areas ^b			SEER 9 Areas ^b		
	Rate 2002-2006			Trend 1997-2006 ^c			Trend 1997-2006 ^d		
	Rate per 100,000 persons			AAPC (%)			AAPC (%)		
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females	Total	Males	Females
All Races	21.0	37.1	9.3	-0.5	-0.2	-0.4*	-0.2	-0.2	-0.6
White	22.8	40.3	9.9	-0.5	-0.1	-0.9*	-0.1	-0.2	-0.7
White Hispanic ^e	11.7	20.2	5.4	-0.5	-0.6	-0.5	-	-	-
White Non-Hispanic ^e	24.3	42.9	10.5	-0.4	0.1	-0.8	-	-	-
Black	12.8	20.0	7.9	0.3	0.1	0.7	0.2	0.1	0.4
Asian/Pacific Islander	9.3	16.5	4.0	0.2	0.7*	-0.3	-	-	-
Amer Ind/Alaska Nat ^f	7.4	12.4	3.4	-	-	-	-	-	-
Hispanic ^e	11.4	19.8	5.3	-0.3	-0.4	-0.4	-	-	-
<u>U.S. Mortality^g</u>									
	Rate 2002-2006			Trend 1997-2006 ^h					
	Rate per 100,000 persons			AAPC (%)					
RACE/ETHNICITY	Total	Males	Females	Total	Males	Females			
All Races									
White									
White Hispanic ^e									
White Non-Hispanic ^e									
Black									
Asian/Pacific Islander									
Amer Ind/Alaska Nat									
Total U.S.									
CHSDA Counties									
Non-CHSDA Counties									
Hispanic ^e									

The AAPC is the Average Annual Percent Change over the time interval. The AAPCs are calculated by the Joinpoint Regression Program Version 3.3, April 2008, National Cancer Institute.

Statistic not shown. Rate based on less than 16 cases for the time interval.

Trend based on less than 10 cases for at least one year within the time interval.

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130). Trends are based on rates age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130).

^b The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 13 areas comprise the SEER 9 areas plus San Jose-Monterey, Los Angeles, the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

^c The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 2 Joinpoints over diagnosis years 1992-2006.

^d The 1997-2006 AAPC estimates are based on a Joinpoint analysis with up to 4 Joinpoints over diagnosis years 1975-2006.

^e Hispanic and Non-Hispanic are not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics and Non-Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. The 2002-2006 Hispanic and Non-Hispanic death rates exclude deaths from Minnesota, New Hampshire and North Dakota. The 1997-2006 Hispanic and Non-Hispanic mortality trends exclude deaths from Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma and Vermont.

^f Incidence data for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

^g US Mortality Files, National Center for Health Statistics, CDC.

^h The 1997-2006 mortality AAPCs are based on a Joinpoint analysis using years of death 1992-2006.

* The APC is significantly different from zero (p<.05).

Table 27.13
Cancer of the Urinary Bladder

Age-Adjusted SEER Incidence Rates^a
By Registry, Race and Sex

	All Races			Whites			Blacks		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
<u>SEER Incidence Rates^a, 2002-2006</u>									
Atlanta & Rural Georgia	16.32	28.87	7.79	18.92	33.80	8.35	10.48	15.83	7.02
Atlanta	16.37	28.79	7.94	18.89	33.62	8.45	10.75	15.91	7.35
Rural Georgia	16.16	30.74	5.98	19.98	37.45	7.06	8.06	-	-
California	19.20	34.01	8.20	20.96	37.12	8.83	13.39	21.22	7.89
Greater Bay Area	18.48	32.22	8.36	21.77	37.83	9.82	12.31	19.75	7.11
San Francisco-Oakland	18.17	31.49	8.40	21.76	37.68	9.87	11.51	17.94	7.07
San Jose-Monterey	19.08	33.74	8.23	21.77	38.15	9.68	19.58	36.06	-
Los Angeles	17.78	31.93	7.62	19.49	35.17	8.13	14.56	23.51	8.74
Greater California	20.15	35.62	8.42	21.32	37.69	8.83	12.36	18.85	7.17
Connecticut	26.21	45.37	12.59	27.29	47.17	13.03	12.64	19.51	8.13
Detroit	24.02	42.92	10.96	26.55	47.75	11.61	13.70	21.73	8.46
Hawaii	15.09	26.18	6.22	25.93	43.05	11.21	-	-	-
Iowa	22.76	40.69	9.59	22.51	40.31	9.47	11.04	-	-
Kentucky	21.94	38.95	9.88	22.37	39.81	9.95	14.12	22.19	9.00
Louisiana	19.58	35.17	8.62	22.29	40.18	9.36	11.43	18.66	6.68
New Jersey	26.20	46.16	12.18	28.01	49.41	12.76	13.18	19.22	9.29
New Mexico	15.73	26.71	7.00	16.83	28.51	7.46	-	-	-
Seattle-Puget Sound	24.29	42.63	10.38	25.64	44.91	10.88	16.17	25.38	8.64
Utah	15.99	28.25	6.12	16.30	28.70	6.31	-	-	-
9 SEER Areas ^b	21.07	36.94	9.42	23.13	40.56	10.18	12.42	19.40	7.78
11 SEER Areas ^b	20.22	35.65	8.95	22.29	39.31	9.72	13.08	20.75	8.01
13 SEER Areas ^b	20.19	35.61	8.93	22.29	39.31	9.71	13.00	20.68	7.94
17 SEER Areas ^b	21.02	37.11	9.27	22.80	40.27	9.89	12.75	20.01	7.91

^a Rates are per 100,000 and are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1130)

^b The SEER 9 areas are San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah and Atlanta.

The SEER 11 areas comprise the SEER 9 areas plus San Jose-Monterey and Los Angeles.

The SEER 13 areas comprise the SEER 11 areas plus the Alaska Native Registry and Rural Georgia.

The SEER 17 areas comprise the SEER 13 areas plus California excluding SF/SJM/LA, Kentucky, Louisiana and New Jersey.

- Statistic not shown. Rate based on less than 16 cases for the time interval.

Table 27.18
Cancer of the Urinary Bladder (Invasive)

Estimated United States Cancer Prevalence Counts^a on January 1, 2006
By Race/Ethnicity, Sex and Years Since Diagnosis

Years Since Diagnosis		0 to <5	5 to <10	10 to <15	15 to <20	20 to <25	25 to <30	0 to <16 ^e	0 to <31 ^e	>=31 ^g	Complete ^h
<u>Race</u>	<u>Sex</u>										
All Races ^b	Both Sexes	188,227	127,800	86,030	53,796	32,634	18,084	414,603	508,818	18,678	527,496
	Males	140,439	95,158	63,819	39,794	23,482	12,677	308,631	376,871	12,094	388,965
	Females	47,788	32,642	22,211	14,002	9,152	5,407	105,972	131,947	6,584	138,531
White ^b	Both Sexes	174,608	119,935	81,097	51,448	31,099	17,298	387,559	477,550	14,627	492,177
	Males	131,060	89,679	60,169	38,026	22,390	12,187	289,662	354,884	9,316	364,200
	Females	43,548	30,256	20,928	13,422	8,709	5,111	97,897	122,666	5,311	127,977
Black ^b	Both Sexes	8,208	4,408	3,180	1,522	933	422	16,177	18,748	305	19,053
	Males	5,275	2,854	2,322	1,165	641	256	10,719	12,575	245	12,820
	Females	2,933	1,554	858	357	292	166	5,458	6,173	60	6,233
Asian/ Pacific Islander ^c	Both Sexes	2,828	1,604	1,000	+	+	+	5,569	+	+	+
	Males	2,136	1,179	750	+	+	+	4,162	+	+	+
	Females	692	425	250	+	+	+	1,407	+	+	+
Hispanic ^d	Both Sexes	5,959	3,537	2,232	+	+	+	12,129	+	+	+
	Males	4,439	2,663	1,679	+	+	+	9,067	+	+	+
	Females	1,520	874	553	+	+	+	3,062	+	+	+

Estimated prevalence percent^a on January 1, 2006, of the SEER 11 population diagnosed in the previous 16 years
By Age at Prevalence, Race/Ethnicity and Sex

Age at Prevalence		Age Specific (Crude)									Age-Adjusted ^f	
		All Ages	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	All Ages
<u>Race</u>	<u>Sex</u>											
All Races ^c	Both Sexes	0.1146%	0.0001%	0.0003%	0.0019%	0.0069%	0.0294%	0.1111%	0.3557%	0.7480%	0.9882%	0.1214%
	Males	0.1735%	-	0.0004%	0.0024%	0.0100%	0.0445%	0.1752%	0.5813%	1.3098%	1.9667%	0.2142%
	Females	0.0567%	-	0.0002%	0.0015%	0.0039%	0.0142%	0.0500%	0.1521%	0.3145%	0.4453%	0.0529%
White ^c	Both Sexes	0.1365%	0.0001%	0.0003%	0.0024%	0.0083%	0.0333%	0.1268%	0.4084%	0.8532%	1.0777%	0.1370%
	Males	0.2057%	-	0.0005%	0.0029%	0.0115%	0.0497%	0.1971%	0.6584%	1.4838%	2.1806%	0.2407%
	Females	0.0672%	-	-	0.0018%	0.0048%	0.0165%	0.0576%	0.1767%	0.3552%	0.4729%	0.0594%
Black ^c	Both Sexes	0.0403%	-	-	-	0.0036%	0.0167%	0.0636%	0.1773%	0.3302%	0.4624%	0.0584%
	Males	0.0571%	-	-	-	0.0058%	0.0273%	0.1042%	0.2996%	0.5451%	0.7724%	0.0975%
	Females	0.0250%	-	-	-	0.0016%	0.0074%	0.0298%	0.0820%	0.1872%	0.3123%	0.0325%
Asian/ Pacific Islander ^c	Both Sexes	0.0482%	-	-	0.0007%	0.0020%	0.0131%	0.0404%	0.1272%	0.3125%	0.5751%	0.0539%
	Males	0.0741%	-	-	-	0.0029%	0.0216%	0.0659%	0.2196%	0.5525%	1.0174%	0.0943%
	Females	0.0239%	-	-	-	0.0012%	0.0053%	0.0179%	0.0490%	0.1366%	0.2836%	0.0241%
Hispanic ^d	Both Sexes	0.0268%	-	-	0.0008%	0.0041%	0.0149%	0.0482%	0.1589%	0.3314%	0.4865%	0.0562%
	Males	0.0387%	-	-	0.0007%	0.0052%	0.0211%	0.0735%	0.2692%	0.6008%	0.9210%	0.0991%
	Females	0.0142%	-	-	0.0009%	0.0027%	0.0083%	0.0241%	0.0654%	0.1354%	0.2339%	0.0251%

^a US 2006 cancer prevalence counts are based on 2006 cancer prevalence proportions from the SEER registries and 1/1/2006 US population estimates based on the average of 2005 and 2006 population estimates from the US Bureau of the Census. Prevalence was calculated using the First Malignant Primary Only for a person.

^{b c d} Statistics based on (b) SEER 9 Areas (c) SEER 11 Areas and Rural Georgia (d) NHIA for Hispanic for SEER 11 Areas and Rural Georgia.

^e Maximum limited-duration prevalence: 31 years for 1975-2006 SEER 9 data; 16 years for 1990-2006 SEER 11 data (used to calculate prevalence for Hispanics and Asian Pacific Islanders).

^f Percentages are age-adjusted to the 2000 US Standard Population (19 age groups - Census P25-1130) by 5-year age groups.

^{g h i} (g) Cases diagnosed more than 31 years ago were estimated using the completeness index method (Capocaccia et. al. 1997, Merrill et. al. 2000). (h) Complete prevalence is obtained by summing 0 to <31 and >=31. (i) Age-specific completeness index was approximated using empirical data from historical Connecticut tumor registry.

- Statistic not shown. Statistic based on fewer than 5 cases estimated alive in SEER for the time interval.

+ Not available.

SEER Observed Incidence, SEER Delay Adjusted Incidence and US Death Rates^a Cancer of the Urinary Bladder, by Race and Sex

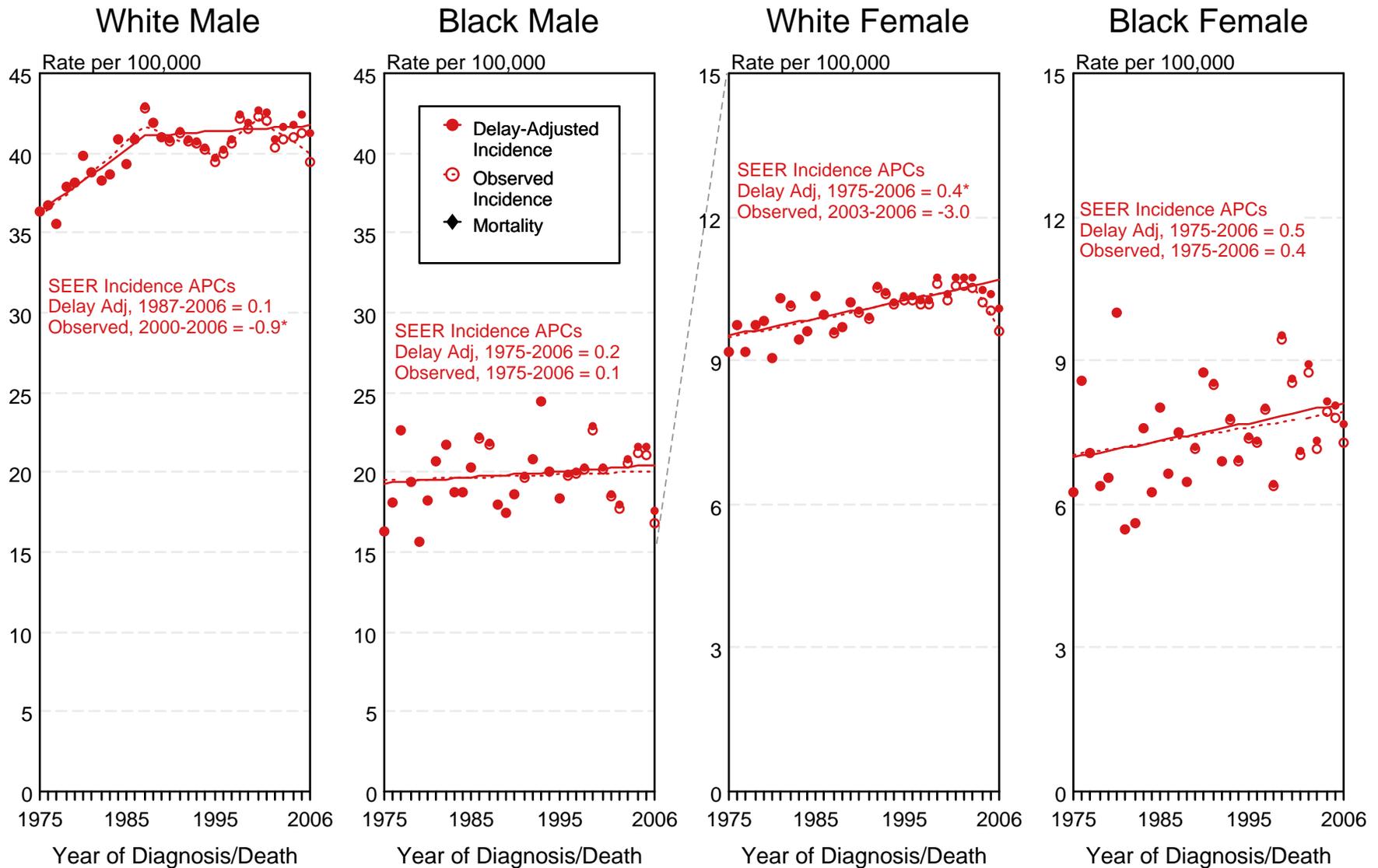


Figure 27.1

^a Source: SEER 9 areas and US Mortality Files (National Center for Health Statistics, CDC). Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103). Regression lines and APCs are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. The APC is the Annual Percent Change for the regression line segments. The APC shown on the graph is for the most recent trend.
* The APC is significantly different from zero ($p < 0.05$).

SEER Incidence and US Death Rates^a Cancer of the Urinary Bladder, Both Sexes

Joinpoint Analyses for Whites and Blacks from 1975-2006 and for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics from 1992-2006

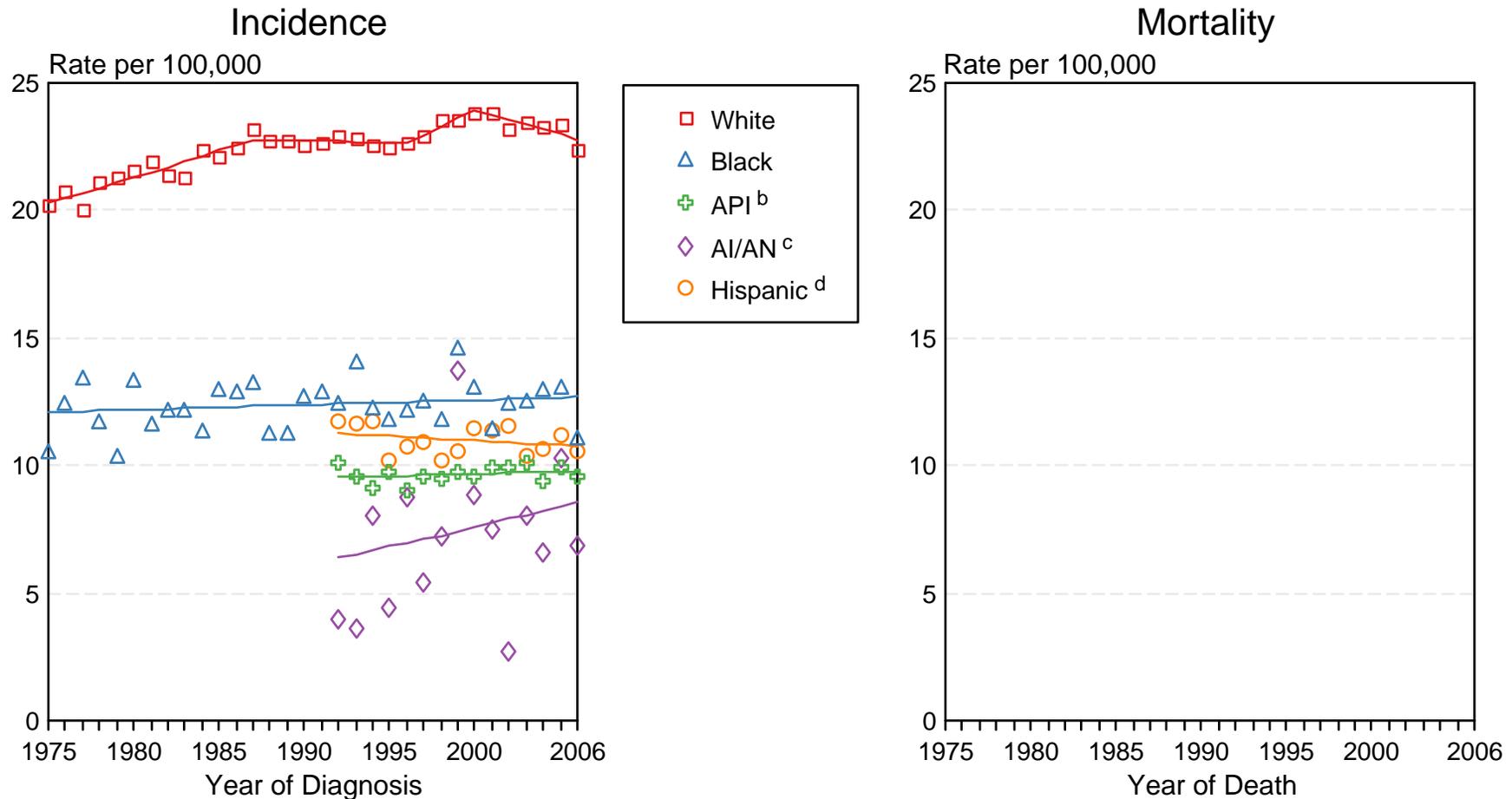


Figure 27.2

Source: Incidence data for whites and blacks are from the SEER 9 areas (San Francisco, Connecticut, Detroit, Hawaii, Iowa, New Mexico, Seattle, Utah, Atlanta).

Incidence data for Asian/Pacific Islanders, American Indians/Alaska Natives and Hispanics are from the SEER 13 Areas (SEER 9 Areas, San Jose-Monterey, Los Angeles, Alaska Native Registry and Rural Georgia). Mortality data are from US Mortality Files, National Center for Health Statistics, CDC.

^a Rates are age-adjusted to the 2000 US Std Population (19 age groups - Census P25-1103).

Regression lines are calculated using the Joinpoint Regression Program Version 3.3.1, April 2008, National Cancer Institute. Joinpoint analyses for Whites and Blacks during the 1975-2006 period allow a maximum of 4 joinpoints. Analyses for other ethnic groups during the period 1992-2006 allow a maximum of 2 joinpoints.

^b API = Asian/Pacific Islander.

^c AI/AN = American Indian/Alaska Native. Rates for American Indian/Alaska Native are based on the CHSDA (Contract Health Service Delivery Area) counties.

^d Hispanic is not mutually exclusive from whites, blacks, Asian/Pacific Islanders, and American Indians/Alaska Natives. Incidence data for Hispanics are based on NHIA and exclude cases from the Alaska Native Registry. Mortality data for Hispanics exclude cases from Connecticut, Maine, Maryland, Minnesota, New Hampshire, New York, North Dakota, Oklahoma, and Vermont.